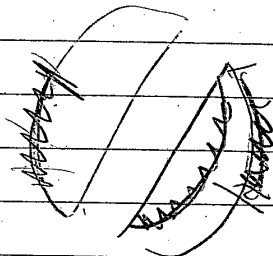


RS-6 TRANSMITTER 1-30-52
~~RECEIVER~~ READINGS OF

POWER OUTPUT

AFTER INSTALLING DUAL
PATENT COILS -
WITH CONTINUOUSLY VARIABLE
ANTENNA TAPS.



STAT

RTG XMTR.

1-30-52

(SEE READINGS DATED 2-11-52 & 2-12-52)

f	I _{TOTAL}	I _P	E _g	E _a	P _o	Eff	E _b
3.0	72	60	29.5	89	13.2	59%	375
6.0(x2)	70	59	20	94	14.7	66.5%	375
6	74	63	26	94	14.7	62.4	375
7(LB)	74	63	26.5	89	13.2	58%	375
7(HB)	74	63	4.0	80	10.7	47.5%	375
14(X2)	80	68	—	53	5.7	22.4%	375
3.0	75	62	20	92	14.1	57.9%	400
6.0(x2)	75	62	19	96	15.35	62%	400
6.0	75	62	28	97	15.7	63.5%	400
7(LB)	76	63.5	27	92	14.1	63.0%	400
7(HB)	76	64	4.1	84	11.75	46%	400
14(X2)	80	68	—	58	5.6	20.9%	400
3.0(B)	64	53.5	18.0	78	10.1	53.6%	350
6.0(x2)	64	53.5	17.0	83	11.5	63.25%	350
6.	64	52.5	25.5	84	11.75	64%	350
7(LB)	65	54	25.0	79	10.4	45.7%	350
7(HB)	65	54	3.9	71	8.4	37%	350
14(X2)	72	62	—	58	5.6	22.2%	350

ABOVE READINGS TAKEN USING SUGGESTED
INDUCTANCES WITH CONTINUOUSLY VARIABLE
ANTENNA TAP. PLUS USE OF SPARK-STATON
CONDENSER. MITSUBISHI BOONTON-UTUM-GIRUTUM
AND ROLLEN SMITH VOM.

CONCLUSION: OSCILLATOR
OUTPUT TOO LOW ON HIGH BAND. STAT
RESULTING IN TOO LOW OUTPUT FROM
P.A.
REMEDY - BRING DRIVE UP BY MODIFICATION
OF OSCILLATION STAGE OR INCREASE IN P.A.

2E2L PA					6A4S OSC				I _{TOT}	REMARKS
f	E _p	E _{sg}	I _p	I _{sg}	E _p	E _{sg}	I _p	I _{sg}		
3.0mc	400	286	62	2.3	200	195	6.06	3.4	75	USING ORIG
3.0mc	350	210	53	5.8	180	170	4.0	1.2	64	VALUE R _{sg}
3.0mc	350	230	58	8.0	170	225	8.75	2.1	74	4700R
EXPERIMENTAL		230	58	8.0	170	220	9.0	2.8	72	4200-R
		235		7.7	170	225	9.0	2.4	74	
					200	240				
		230			310	175				
		235			235	170			72	
3.0mc	350	235	58	18K 5.73	200	200	30K 5.0	10K 1.45	70	WITH MODIFICATION OF SCREEN & PLATE R. IN OSC & P.A. SCREEN
INCREASING VOLTAGES TO OSC STAGES TO EQUAL THAT OBTAINED WITH 400V SUPPLY										

VOLTAGES CHANGE AFTER ABOVE

MEASUREMENTS ON Q METER

LB		HB		VALUES IN XMTL - P.A. TANK					
Q	C	Q	C	KB IN OH	HB IN OH	C MAX	C MIN	C/2 MAX	C/2 MIN
122	213	160	174	13.2	4.5	245	39.3	112	29.6
129	345	115	30			1205			37

2 = 2490 @ 3mc
2 = 5800 @ 7mc

AT 13.4mc MAX FREQ.

1364
62/10

30K
4819

240-50
200
16000

NOTE: FINAL VOLTAGES: E_{p osc} = 210 E_{sg osc} = 165
E_{p (PA)} = 350 E_{sg (PA)} = 215

STAT

II

1-30-52

P.A. COIL CALCULATIONS

GIVEN:

$L = 4.2 \text{ mh.}$

$C/2 = 112 \text{ mmf MAX}$

29.6 mmf MIN.

$f = 7.4 \text{ MIN}$

$f = 14.5 \text{ MAX}$

STAT

$L = \text{REQUIRED FOR } C = 112 \text{ mmf} = 4.8 \text{ mh @ } 7.0 \text{ mc}$
 BUT AT $29.6 \text{ mmf (MIN. C)}$ $f = 13.5 \text{ mc.}$

THEREFORE $C/2$ MUST BE INCREASED TO (NOT GOOD)

WITH MIN CAP OF $29.6 \text{ mmf @ } 14.5 \text{ mc}$

L SHOULD BE 3.15 mh.

THEN C_{MAX} SHOULD BE $170 \text{ mmf @ } 6.95$

$X_L @ 7.4 = 136.4 \Omega.$

$X_L @ 11.7 = 228 \Omega.$

$X_L @ 16.5 = 321 \Omega$

16

STAT

CONCLUSION:- HB COIL SLIGHTLY OFF
 IN INDUCTANCE, PLUS UNCONNECT
 VALUE OF CAPACITY REDUCING OVERALL
 TUNING RANGE. TOO HIGH MINIMUM
 VALUE OF TUNING CAPACITANCE.

STAT

REMEDY; DUE TO LIMITATIONS, BEST
 COMPROMISE TO ADJUST INDUCTANCE
 TO COME WITHIN RANGE IF POSSIBLE,
 TOO